

REMARKS

Claims 1-13 are now pending in the application. Claims 1-2, 4-6, 8-12 are currently amended. Claim 13 is new. The amendments are supported by the specification, claims, and drawings as originally filed. No new matter has been added. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 112

Claims 1-2, 4-6, and 8-12 stand rejected under 35 U.S.C. § 112, second paragraph because certain limitations lack sufficient antecedent bases. Applicant has amended the claims to provide appropriate antecedent basis. Thus, Applicant respectfully requests withdrawal of the rejections under 35 U.S.C § 112.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen (US 20040165592 A1) in view of Silverman (US 6731649 B1). This rejection is respectfully traversed.

Applicant has amended claim 1 to more clearly point out the claimed subject matter. Claim 1 recites, among other things, 1) the service entity requesting network resources to access network corresponding to the calling subscriber and the called subscriber, respectively and 2) after receiving requests, edge routers of the access network corresponding to the calling subscriber and the called subscriber judging whether enough resources can be provided for this service according to current

resource condition. In other words, it is the service entity that requests the edge routers to check whether enough resources can be provided for the service, and it is the edge routers that respectively determine whether the bandwidth is available, or whether the bandwidth can be granted.

Chen fails to teach or suggest the above limitations. In Chen, the connection server does not request the ATM switch to check the availability of the bandwidth. It is the connection server, as acknowledged by the Examiner, that determines whether the bandwidth is available, or whether the bandwidth can be granted. See, para. [0032] of Chen. The service entity in the subject application does not correspond to the connection server in Chen, as the Examiner has acknowledged.

In claim 1, after obtaining QoS requirement for a service from the calling subscriber, the service entity applies for network resources to edge routers of the access network corresponding to the calling subscriber and the called subscriber. It is the service entity that initiates both the edge router of the calling subscriber and the edge router of the called subscriber to check the availability network resources.

Chen fails to teach or suggest the above limitations. Chen discloses that “the ATM switch 15 sends the SETUP message to the terminating edge switch, ATM switch 19 to check whether there are enough network resources to accommodate this connection.” See, paras [0099]-[0100] of Chen. It is the originating ATM switch (i.e., ATM switch 15) that initiates the terminating edge switch (i.e., ATM switch 19) to check the availability of network resources.

Claim 1 further recites after determining that there are enough resources for the service, the edge router informs the end device of the QoS requirement. That is, the end device gets the QoS requirement from the edge router.

Chen fails to teach or suggest the above limitations. Chen discloses “the source subscriber 10 ... initiates a connection with the ATM network 16 by sending a signaling message, such as a setup connection request, to the ATU-R 12. Upon receipt of the connection setup request, the ATU-R 12 sends a standard SVC SETUP message ... through the DSLAM 14, to ... the ATM switch 15. The SETUP message likewise includes ... the QoS requirement.” See, [0094] and [0095] of Chen. The QoS requirement is sent from the ATU-R 12, which is closest to the source subscriber, to the ATM switch in the procedure of Chen.

Moreover, claim 1 directed to a mechanism of applying different management on upward traffic streams and downward traffic streams when guaranteeing QoS. As to the upward traffic streams, the QoS is guaranteed under the cooperation of edge router and end device. In claim 1, the edge router firstly judges whether enough resources can be provided to the service, i.e., whether the QoS requirement of the service can be satisfied. If yes, the edge router informs the end device of the QoS requirement, and the end device processes traffic streams according to the QoS requirement. For example, the end device processes bandwidth limitation according to bandwidth parameters, i.e., controls the entering traffic streams not to exceed the QoS requirement. See, para. [0037] of the subject application. Applicant notes that the edge router and end device are two important points of the access network. The edge router is connected to the backbone network, while the end device is the closest to

subscribers. Therefore, QoS of the upward traffic of the service can be guaranteed through performing QoS control by both these two points. As to the downward traffic streams, considering characteristics of the downward traffic streams, QoS control is performed in the edge router by setting priority for the downward traffic streams.

Chen fails to teach or suggest the above limitations. Chen at best discloses adopting permanent virtual connections (PVCs) from the subscriber to the ATU-R and then to the DSLAM, for guaranteeing application QoS. See, paras. [0003] and [0039] of Chen.

Applicant further submits that Silverman also fails to teach or suggest the above limitations. Silverman at best appears to disclose a method and system for processing one or more TDMs trunks for communication over IP networks, includes encapsulating ATM cells (packets) using AAL1 cells within UDP over IP frames to provide synchronous bit streams into fixed size cells. See, paragraph [0033] of Silverman.

In view of the foregoing, Applicant respectfully submits that claim 1 and its dependent claims 2-13 define over the art cited by the Examiner. Thus, Applicant respectfully requests withdrawal of the rejections.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and

favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: January 30, 2008

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